

Chapter 5

LABELING OF POLYCHLORINATED BIPHENYL (PCB) ITEMS

April 1992

BUSHINGS	
PCB Concentrations Per 40 CFR 761	
1. _____ ppm	6. _____ ppm
2. _____ ppm	7. _____ ppm
3. _____ ppm	8. _____ ppm
4. _____ ppm	9. _____ ppm
5. _____ ppm	10. _____ ppm
BUSHINGS	

PCB- CONTAMINATED
ELECTRICAL EQUIPMENT
PCB Contaminated Per 40 CFR 761

CAUTION
CONTAINS
PCBs
(Polychlorinated Biphenyls)
A toxic environmental contaminant requiring special handling and disposal in accordance with U.S. Environmental Protection Agency Regulations 40 CFR 761 --- For Disposal Information, contact the nearest U.S. E.P.A. Office.
In case of accident or spill, call toll free the U.S. Coast Guard National Response Center: 800:424-8802
Also Contact Tel. No.

NON-PCB
Non-PCB Per 40 CFR 761



POWER SYSTEM MAINTENANCE MANUAL

PROCEDURES FOR LABELING POLYCHLORINATED BIPHENYL (PCB) ITEMS

APRIL 1992

**WESTERN AREA POWER ADMINISTRATION
POWER SYSTEM MAINTENANCE MANUAL
CHAPTER 5**

Approved for Publication and Distribution



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Date

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Preface

This labeling program is issued by the Western Area Power Administration (Western) and is designed to provide specific guidelines, instructions, procedures, and criteria for labeling all oil- or compound-filled electrical equipment and other items regardless of polychlorinated biphenyl (PCB) content. Procedures are in accordance with the Code of Federal Regulations, Title 40, Part 761 and the Department of Energy's Best Management Practices. The term labeling includes, but is not limited to, the definition of marked as stated in 40 CFR 761. Any corrections or comments concerning this program may be addressed to the Western Area Power Administration, Division of Power System Maintenance, A6200, Golden, Colorado.

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1. Introduction

The Code of Federal Regulations, Title 40, Part 761 (40 CFR 761), specifies that all oil- or compound-filled electrical equipment and items containing a concentration of 500 parts per million (ppm) or more polychlorinated biphenyls (PCB) must be labeled. Labeling all equipment and items which could potentially contain PCB's goes beyond these regulations, but corresponds to Best Management Practices recommended by DOE. Therefore, it is Western's procedure under this program to label all oil- or compound-filled electrical equipment and items with one of four labels: PCB, PCB Contaminated, Non-PCB, or Bushings.

For inservice electrical equipment, there are three labeling categories:

- 1) PCB - Concentrations of 500 parts per million (ppm) or more
- 2) PCB Contaminated - Concentrations greater than or equal to 50 ppm but less than 500 ppm
- 3) Non-PCB - Concentrations less than 50 ppm.

There are two labeling categories for electrical equipment and other items stored for disposal. These categories also apply to all storage tanks whether in use or stored for disposal:

- 1) PCB - Concentrations greater than or equal to 50 ppm
- 2) Non-PCB - Concentrations less than 50 ppm.

The above limits and any required labels may vary on a state-by-state basis. For example, as of 1991 in California, equipment removed from service with greater than 5 ppm PCB must have a hazardous waste label, a PCB mark, and a Department of Transportation label. Appendix A has a table which should be filled out with the appropriate information for each state in an Area or District Office's region.

By regulation, the size of the PCB mark is 6 inches by 6 inches (6x6 in). However, if the PCB electrical equipment or item is too small to accommodate this size, the mark may be reduced in size proportionately to a minimum of 2 inches on each side. Western's other three labels (PCB Contaminated, Non-PCB, and Bushings) may also vary in size. The use of these labels enables personnel (Western and others) to appropriately handle and/or dispose of (1) the equipment or item and (2) any releases from the equipment or item.

2. PCB Items and PCB Electrical Equipment

The PCB mark is used for two different cases. The first use is for inservice electrical equipment containing oil or a compound with a PCB concentration greater than or equal to 500 ppm. The second case includes the following:

- Electrical equipment and items stored for disposal with a PCB concentration greater than or equal to 50 ppm,
- All storage tanks in use or stored for disposal with a PCB concentration greater than or equal to 50 ppm, or
- Debris (regardless of concentration) which was contaminated with 50 ppm PCB or more and is stored for disposal.

In either case, use the PCB mark shown in figure 1 which is required by 40 CFR 761. This label is yellow with black lettering.

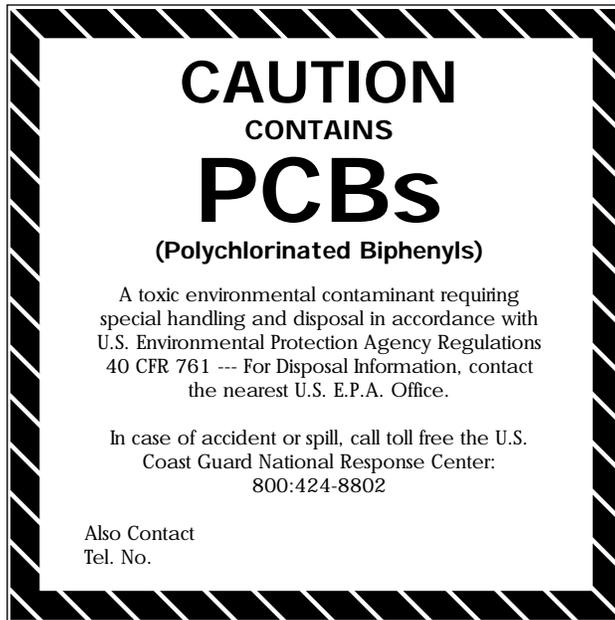


Figure 1
PCB Mark

3. PCB-Contaminated Electrical Equipment

Use the PCB Contaminated label for inservice electrical equipment (i.e., transformers, circuit breakers, capacitors, etc.) containing oil or a compound with a PCB concentration greater than or equal to 50 ppm, but less than 500 ppm. See appendix A for states with different limits. The label, shown in figure 2, is yellow with black lettering and has a blank space on the lower half which should be used for item-specific information.

For electrical equipment that has been tested, the PCB concentration in parts per million and either the date of the test or the test identification number should be stated in this space. Untested equipment is assumed to be PCB contaminated and should be labeled with the statement, "Untested and assumed to contain ≥ 50 ppm but < 500 ppm PCB."



Figure 2
Label for PCB-Contaminated
Electrical Equipment

4. Non-PCB Items and Electrical Equipment

Items and electrical equipment with oil or a compound containing a PCB concentration less than 50 ppm will be labeled with the Non-PCB label. See appendix A for states with a limit other than 50 ppm. This label (see figure 3) is royal blue with white lettering. It includes a blank space where item-specific information can be entered. This information should state one of the following:

- PCB concentration in parts per million and the date of the test,
- PCB concentration in parts per million and the test identification number, or
- “Manufacturer Certification, x ppm” where x is given by the manufacturer.

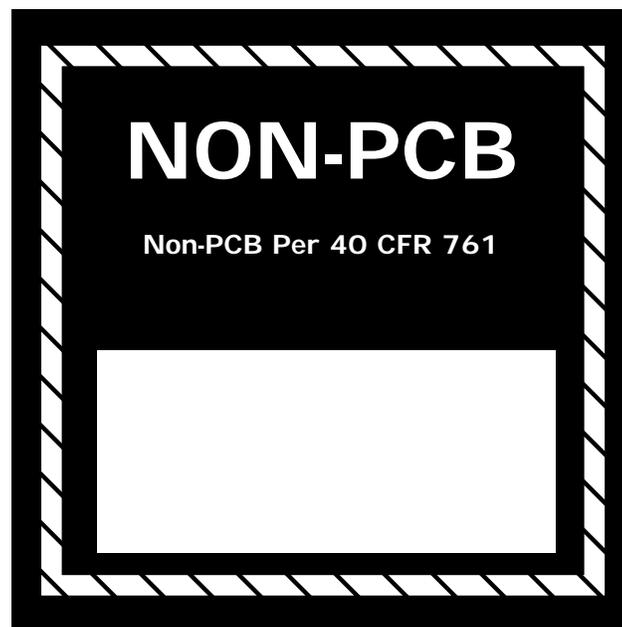


Figure 3
Label for Non-PCB Items and
Electrical Equipment

5. Bushings

Electrical equipment with attached oil- or compound-filled bushings must be labeled with the bushings label. For bushings, one white and black label will be posted on the operating cabinet of the equipment. This label allows the PCB concentration in parts per million to be recorded for each bushing on the piece of equipment. Information similar to that of the other labels may be included, such as “Untested and assumed to contain ≥ 50 ppm but < 500 ppm PCB,” the PCB concentration with test date or test identification number, or “Manufacturer Certification, x ppm” where x is given by the manufacturer. If all of the bushings are untested, each Area/District Office may have the labels printed with the untested and assumed statement in each bushing location.

BUSHINGS	
PCB Concentrations Per 40 CFR 761	
1. _____ ppm	6. _____ ppm
2. _____ ppm	7. _____ ppm
3. _____ ppm	8. _____ ppm
4. _____ ppm	9. _____ ppm
5. _____ ppm	10. _____ ppm
BUSHINGS	

Figure 4
Bushings Label

If needed, a key or drawing indicating bushing locations should be placed near the bushings label. Examples can be seen in figures 5, 6, and 7.

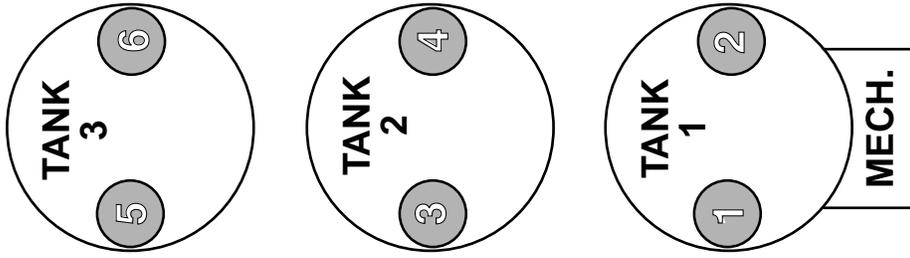


Figure 5
Key to Bushings on Oil Circuit Breakers

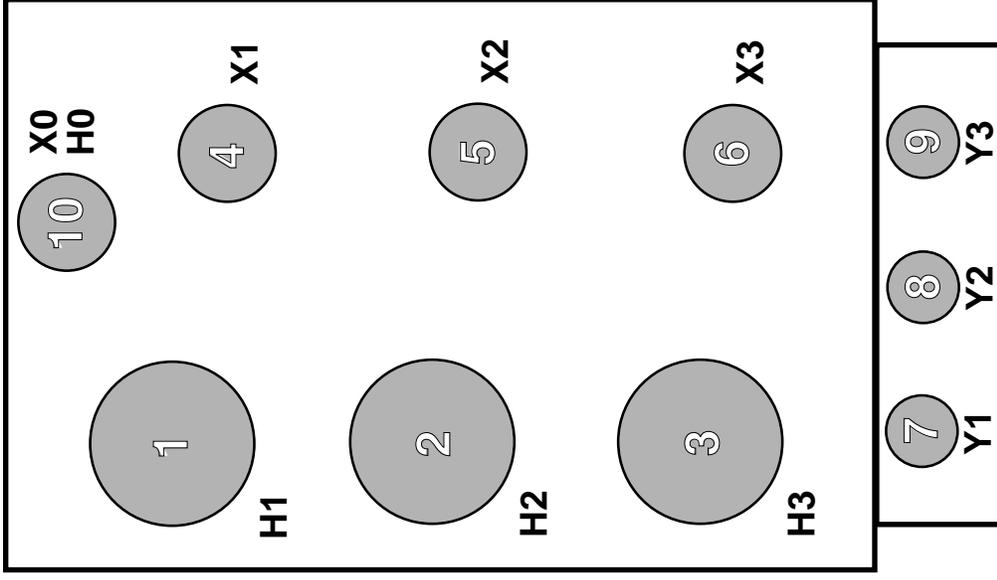


Figure 6
Key to Bushings on Power Transformers

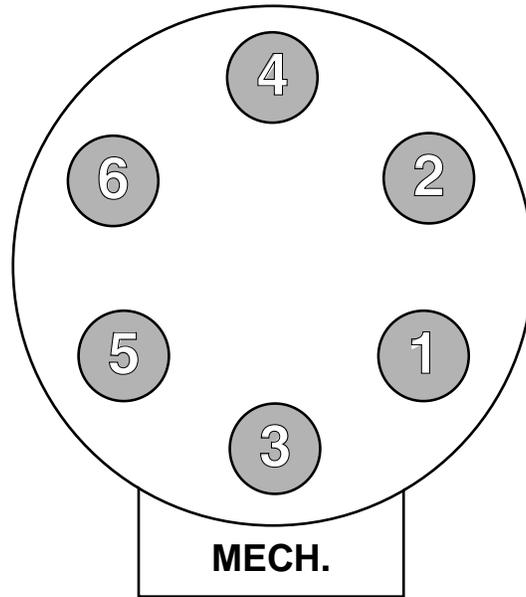


Figure 7
Key to Bushings on Single Tank
Oil Circuit Breakers

6. Labeling Suggestions

6. 1 Noting PCB Content on Labels. To avoid problems with fading ink, an embossed metal self-adhesive strip is recommended for identifying the item-specific legend. When applied to a clean surface, such labels adhere indefinitely, do not fade, and remain legible even if painted over. A second solution to the fading ink problem is to put extra labels inside the operating cabinet door and completely fill them out. When the labels on the equipment fade, they should be darkened with the information from the backup labels instead of having to contact the office.

6. 2 Placement of Labels (Except Bushings Label). If practical, a label should be placed on a piece of equipment so that it is visible from the substation entrance. The label should also be out of the weather as much as possible. For equipment which is not easily accessible, such as capacitor banks, potential transformers (PT), and current transformers (CT); the label should be placed on the structure where it is readable from ground level. If the above-mentioned equipment has a manufacturer's certification and it is not readable from the ground level without the aid of binoculars, a label should be added to the structure as a best management practice. A drawing of the layout of the capacitor bank should be located at the substation. This drawing should clearly note each capacitor and its PCB status (PCB, PCB contaminated, or Non-PCB).

APPENDIX A - State Accepted PCB Limits

The table shown below has been developed to allow each Area and District Office to appropriately fill in the needed information. As the limits change, personnel should be informed so that they may update their information.

Lower limit and upper limit are defined as follows:

Non-PCB - a PCB concentration less than the lower limit.

PCB Contaminated - a PCB concentration greater than or equal to the lower limit and less than the upper limit.

PCB - a PCB concentration greater than or equal to the upper limit.

LOCATION	LOWER LIMIT	UPPER LIMIT
40 CFR 761	50 ppm	500 ppm
Arizona		
California		
Colorado		
Iowa		
Kansas		
Minnesota		
Montana		
Nebraska		
Nevada		
New Mexico		
North Dakota		
South Dakota		
Texas		
Utah		
Wyoming		